What is claimed is:

1. A method of optimizing a number, placement and size of fractures in a subterranean formation, comprising the steps of:

(a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture;

(b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures; and

(c) determining a predicted stress field based on the geomechanical stresses induced by each fracture.

2. The method according to claim 1, wherein steps (a), (b), and (c) are performed prior to creating any of the fractures in the subterranean formation.

3. The method according to claim 1, further comprising the steps of:

determining a cost-effective number of fractures;

determining an optimum number of fractures, where the optimum number of fractures is the maximum cost-effective number of fractrues that does not exceed the geomechanical maximum number of fractures.

4. The method according to claim 1, further comprising the step of spacing the fractures a uniform distance from each other.

5. The method according to claim 1, further comprising the step of creating the fractures with a uniform size.

6. The method according to claim 1, further comprising the steps of:

creating one or more fractures in the subterrenan formation; and

repeating steps (a), (b), and (c) after each fracture is created.

7. The method according to claim 6, wherein the repeating step comprises the steps of gathering and analyzing real-time fracturing data for each fracture created.

8. The method according to claim 7, wherein a well is placed in the subterrenan formation, the well comprising a wellhead, a tubing, and a well bore, the well bore comprising a downhole section, and wherein the gathering of real-time fracturing data comprises the steps of:

(i) measuring a fracturing pressure while creating a current fracture;

(ii) measuring a fracturing rate while creating the current fracture; and

(iii) measuring a fracturing time while creating the current fracture.

9. The method according to claim 8, wherein the measuring of fracturing pressure is accomplished using one or more transducers located at the wellhead.

10. The method of claim 8, wherein the measuring of fracturing pressure is accomplished using one or more transducers located down hole.

11. The method according to claim 8, wherein the fracturing pressure is measured in the tubing.

12. The method according to claim 7, wherein analyzing of real-time fracturing data comprises the steps of:

determining a new stress field, based on the real-time fracturing data; and

comparing the new stress field with the predicted stress field.

13. The method according to claim 12, further comprising the step of decreasing the number of fractures in response to the real-time fracturing data.

14. The method according to claim 12, further comprising the step of increasing the distance between the fractures in response to the real-time fracturing data.

15. The method according to claim 12, further comprising the step of adjusting the size of the fractures in response to the real-time fracturing data.

16. The method according to claim 1, wherein the subterranean formation comprises a well bore comprising a generally vertical portion.

17. The method according to claim 16, wherein the well bore further comprises one or more laterals.

18. A computer implemented method for optimizing a number, placement and size of fractures in a subterranean formation, comprising the steps of:

(a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture;

(b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures; and

(c) determining a predicted stress field based on the geomechanical stresses induced by each fracture.

19. The method according to claim 18, wherein steps (a), (b), and (c) are performed prior to creating any of the fractures in the subterranean formation.

20. The method according to claim 18, further comprising the steps of:

determining a cost-effective number of fractures;

determining an optimum number of fractures, where the optimum number of fractures is the maximum cost-effective number of fractrues that does not exceed the geomechanical maximum number of fractures.

21. The method according to claim 18, further comprising the steps of:

creating one or more fractures in the subterrenan formation; and

repeating steps (a), (b), and (c) after each fracture is created.

22. The method according to claim 21, wherein the repeating step comprises the steps of gathering and analyzing real-time fracturing data for each fracture created.

23. The method according to claim 22, wherein analyzing of real-time fracturing data comprises the steps of:

determining a new stress field, based on the real-time fracturing data; and

comparing the new stress field with the predicted stress field.

24. A method of fracturing a subterrenan formation, comprising the step of:

optimizing a number, placement and size of fractures in the subterranean formation, the step of optimizing comprising:

(a) determining one or more geomechanical stresses induced by each fracture based on the dimensions and location of each fracture;

(b) determining a geomechanical maximum number of fractures based on the geomechanical stresses induced by each of the fractures; and

(c) determining a predicted stress field based on the geomechanical stresses induced by each fracture.

25. The method according to claim 24, wherein substeps (a), (b), and (c) of the optimizing step are performed prior to creating any of the fractures in the subterranean formation.

26. The method according to claim 24, where in the optimizing step further comprises the substeps of:

determining a cost-effective number of fractures;

determining an optimum number of fractures, where the optimum number of fractures is the maximum cost-effective number of fractures that does not exceed the geomechanical maximum number of fractures.

27. The method according to claim 24, further comprising the steps of:

creating one or more fractures in the subterrenan formation; and

repeating substeps (a), (b), and (c) of the optimizing step after each fracture is created.

28. The method according to claim 27, wherein the repeating step further comprises the steps of gathering and analyzing real-time fracturing data for each fracture created.

29. The method according to claim 28, wherein analyzing of real-time fracturing data comprises the steps of:

determining a new stress field, based on the real-time fracturing data; and

comparing the new stress field with the predicted stress field.